Attachment 2

Excerpts from

WHY A BOX OF CRAYONS HAS MANY COLORS, AND THE "CABLE TAX" IS NOT A TAX

WHY CONTRACT CONFIDENTIALITY PROMOTES COMPETITION

AND

WHY THE *NEWS CORP* RETRANSMISSION CONSENT CONDITIONS DON'T APPLY TO OTHER BROADCAST NETWORKS

by

Bruce M. Owen and John M. Gale

August 13, 2004

ECONOMISTS INCORPORATED

Washington DC

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Why A Box Of Crayons Has Many Colors, And The "Cable Tax" Is Not A Tax

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by

Bruce M. Owen and John M. Gale[†]

Summary

Viacom asked us to provide economic analysis of certain issues raised by first round filings in this proceeding. In this brief paper, we reiterate our point that bundling is, in general, a practice highly beneficial to consumers and to competition. We also point out that economic theory does not, as has been insinuated, condemn as inherently suspect all instances of product bundling. Further, the argument that MVPD subscribers are being "taxed" for programming they "do not want" makes no economic sense.

[†] Owen is the Gordon Cain Senior Fellow in Stanford University's Institute for Economic Policy Research and a Special Consultant to Economists Incorporated. Gale is a Senior Economist at Economists Incorporated.

Why A Box of Crayons Has Many Colors

It simply cannot be true, as a matter of common sense, that there is a grave economic inefficiency associated with every product that we purchase, owing to its being made up of various parts. As we pointed out in our earlier paper in this proceeding, virtually all goods and services are bundled at the time of sale.[1] Very often, perhaps most often, the parts of the bundle are not available separately, or would cost more than the price of the bundle if supplied separately.

Nevertheless, some commentators in this proceeding on à la carte cable pricing have asked, "Why should I have to pay for channels I never watch?" The short answer is that they are not paying for them, they are paying for a complete package. The package as a whole is worth more than the price; otherwise they would not subscribe. The long answer requires explaining some basic economic concepts about how bundling a variety of elements into a single sale benefits both the seller and the buyer.

Many products are bundled because the bundling service itself is highly valuable to consumers, as with the purchase of an automobile. Many other products are bundled together into a single sale in order to provide variety to buyers at low cost. For this type of product, consumers would like to have a variety of different types of the product offered as a single purchase. An analogy, though not an exact one, can be drawn between cable networks and crayons. Consumers can choose among 8, 16, 64, or (the coveted) 96 crayon boxes, just as they can choose among the various tiers offered by an MVPD. In each of the boxes there are col-

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1 Bruce Owen and John Gale, *Cable Networks: Bundling, Unbundling, and the Costs of Intervention*, July 15, 2004, submitted with Viacom's initial comments in the matter of À La Carte and Themed Tier Programming and Pricing Options for Programming Distribution on Cable Television and Direct Broadcast Satellite Systems, FCC Docket No. MB-04-207 (July 15, 2004).

ors that a particular consumer likes and uses often and colors that he will likely never use. One could ask the same question about crayons as about cable networks: "Why should I be forced to pay for crayons that I don't like and will never use?" Why shouldn't regulators require that crayons be unbundled so that consumers can buy only the colors they like?

The answer is the same for both crayons and cable networks, though the intuition behind it may be clearer for crayons. For products where it costs little (or nothing) for a provider to include more variety that *someone* may like, it is in the best interests of the seller and the buyer to include elements that not *everyone* wants. One consumer may not care to use the periwinkle crayon, but that is someone else's favorite color, so it is included in the box to please the second person and get him to buy a box. A maker of crayons knows that some colors are popular and some are not-so-popular. To make as many sales as he can, the crayon maker will include the popular colors in more boxes and will also include the not-so-popular colors in some boxes to induce the odd-color-lovers to buy a box of crayons. A color may be included only in the largest box if it appeals to few people, even though it is especially important to those people. In this way the seller makes the complete box more valuable to consumers as a whole, even though it may not make it more valuable to a particular consumer. Finally, it has to be the case that each buyer values the box of crayons he chooses to buy more than the price he pays, even though he may not value a particular color at all. Similarly, removing a particular color from the box because a buyer does not intend to use it would not change the price charged for the box of crayons. The same price is charged to all buyers, whether they use only one color or every color in the box.

In the same way, an MVPD will offer the most popular channels in most packages (or tiers) while also including some specialty or niche channels. By including more channels, the entire package is more valuable to potential cable subscribers on average, so the cable system sells more subscriptions. At the same time, a particular subscriber may not find that the additional channels make the package more valuable to her. It is always true that each subscriber values the entire package more than the price she pays *or she would not choose to subscribe.*

It may seem wasteful for a seller to give people crayons (or channels) that they do not use, but in fact, it can be more costly to provide only the specific colors each buyer wants. For crayons, one could imagine a specialized crayon store with bins of each color crayon where a buyer could mix and match whatever colors he wants. Of course, this would require the creation of the specialized crayon store and a trip by each consumer to the store. In the case of MVPDs, this would require each consumer to have a set-top box for each television and to have good information about the programming on every network offered by the cable system. It is likely more efficient to give a buyer some crayons he does not use (or a subscriber channels she does not watch) than to mandate a system where each buyer only gets the colors he likes (or the channels she watches).

An additional feature shared by crayons and MVPD services is that although consumers buy crayons and channels that they never use, they may value the option of using that color or channel in the future. Crayon purchasers often do not know which colors will be right for some future project, and value the option to experiment. Even the consumer who does not like periwinkle and would not buy a periwinkle crayon if it were sold separately, may have an occasion in the future where he has to use periwinkle to make a picture. Even though that event may be unlikely, he still values the option of using the color. Similarly, there are channels included in a cable subscription that a consumer has never watched, but there may be a day when that channel carries a show she wants to see. Because of this, even if she never watches a channel it can still be of some value to her. Of course, it is even easier to see that consumers value crayons or networks that they do use, albeit infrequently, even if they would not choose that crayon or network if sold separately.

A final feature shared by crayons and MVPD service is that consumers may not be able to predict accurately what colors or channels they will like when they make their initial purchase. A consumer may not have a good idea of whether he will use a cyan crayon (in fact, he may not even know what cyan looks like), so he cannot make an informed decision about whether to buy a cyan crayon. After using his box of crayons, he realizes that he loves cyan and uses it all the time, which makes his box of crayons more valuable than he had expected. If cyan had not been included in his box, he would never have known how much he liked it. Similarly, every subscriber's cable package includes channels she would probably not have chosen. But the history of cable television programming is replete with examples of shows carried on obscure cable channels that become very popular. In these instances there have to be consumers who would not have chosen the channel but, after sampling a particular show, are very happy to have the channel in their package.

While it is true that bundling benefits consumers overall, admittedly it can make some consumers worse off. To return to the example, if a consumer wants a blue crayon, and only a blue crayon—and will never use any color but blue—then depending on the cost of providing that choice it can be cheaper for that one consumer if crayons are not bundled. That consumer would be able to buy a box with only a blue crayon, while consumers who prefer a variety of colors would have to select and pay for each individual color. While a consumer with very narrow tastes may be worse off, bundling makes consumers with broad tastes better off because they pay a lower price than if they had to select and purchase each crayon or network individually. As shown in our initial comments, consumers are likely to pay more for the programming they receive if channels were unbundled. Hence, consumers as a whole would be worse off if bundling were prohibited.

On a closely related point, Consumers Union and Consumer Federation of America (CU/CFA) have introduced a new and highly misleading term into the discussion. They maintain that cable subscribers pay a "cable tax."[2] This tax allegedly consists of the payment that consumers make for programming they don't want but which they must purchase in order to get the programming they do want. This term is misleading for at least two reasons.

First, CU/CFA seem to include among the channels that consumers "want" only the channels that they watch "regularly," estimated to be 12-17 channels on average. As we pointed out in our initial comments, consumers who subscribe to a large tier of channels also derive benefits from the channels that they do not view regularly. These consumers are able to tune to channels outside their "regular" channels to watch attractive shows on an occasional basis. They are also able to browse the other channels to determine at low cost whether they would be of interest. Actual behavior shows that consumers value these options and take advantage of them.

Second, the notion of a "tax" implies that consumers pay more for the bundle of programs that includes some channels that are not of interest than they would pay to receive the channels of interest on an à la carte basis. Our initial comments showed that if networks were widely distributed on an à la carte basis, consumers buying a significant number of networks, such as ten, could well end up paying more for those channels than they currently pay for a tier that includes a much larger collection of networks. It is a strange tax that leaves people better off if they pay it than if they don't.

CU/CFA also submitted a paper by sociologist Dr. Mark Cooper, noting that "the possibility of anti-consumer bundling has long been recognized in static consumer welfare economics literature."[3] Dr. Cooper cites three economic articles

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2 *Comments of Consumers Union and Consumer Federation of America,* July 15, 2004, at 3.

3 Mark Cooper, *Time to Give Consumers Real Cable Choices*, July 2004, at 5.

in support of this statement.[4] These papers consider bundling in circumstances that eliminate many of the potential advantages of bundling from being considered. For example, they assume that bundling is strictly a pricing practice, and that consumers derive no utility from the assembly of the bundle on their behalf. They assume that bundles do not cost less to produce and market than their components would. They also assume that each component of the bundle could viably exist as a stand-alone "product;" that is, they do not consider the vast class of components that are efficiently supplied only as "parts." Dr. Cooper is correct that there is the *possibility* of adverse effects from bundling under certain assumptions, but he does not show, and there is no reason to believe, that MVPD bundling satisfies these assumptions. If Dr. Cooper believes that the situations studied in the theoretical papers he cites are applicable to network programming supplied by MVPDs, he must make that case with appropriate evidence. It is absurd to suggest that every bundled product is guilty of causing consumer harm until proven innocent.

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[4] William J. Adams and Janet L. Yellen, "Commodity Bundling and the Burden of Monopoly," *Quarterly Journal of Economics*, (1976), 475-98; Richard Schmalensee, "Gaussian Demand and Commodity Bundling," *Journal of Business*, (1984), 211-30; and R. P. McAfee, John McMillan, and Michael D. Whinston, "Multi-product monopoly, commodity bundling, and correlation of values," *Quarterly Journal of Economics*, (1989), 371-83.

Attachment 3

November 4, 2004

W. Kenneth Ferree
Chief, Media Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: MB Docket No. 04-207

Dear Mr. Ferree:

Sound analysis, based on long-established and fundamental economic principles, demonstrates that a government requirement that cable and direct broadcast satellite (DBS) television programming be available to customers on an *a la carte* basis would very likely raise prices and harm consumers. Several such analyses have been submitted in the current proceeding, including those conducted by the undersigned economists. Although these analyses differ with respect to certain details, all reach the same fundamental conclusion: government-imposed *a la carte* distribution would very likely harm consumers, programmers, multi-channel video programming distributors (MVPDs), and economic efficiency. These harms would arise even if the government permitted multi-channel providers also to offer discounted programming bundles.

In their submissions, Consumers Union and the Consumer Federation of America (CU/CFA) claim that mandatory unbundling is good public policy. These submissions, however, are based on fundamentally flawed claims, which are grounded in neither sound economic theory nor empirical evidence. We are writing jointly to emphasize the seriousness of the errors in several of these claims and the need to apply proper economic analysis to them.

In this brief letter, we touch on only a few of the most important and misleading errors:

- *CU/CFA submissions misconstrue the economics of bundling and contain no meaningful analysis of the equilibrium effects of government-imposed* a la carte *distribution.* The CU/CFA submissions fail to recognize the efficiency benefits of bundling. They also fail to understand that these benefits may arise whether or not suppliers have market power. A central feature of sound economic analysis is that it traces through the full effects of a policy by determining how it affects equilibrium outcomes. Instead of following this methodology, the CU/CFA submissions simply make unsubstantiated assertions that lack logical and factual bases.

In contrast, the undersigned economists have conducted analyses that focus on the price, output, and program diversity consequences—whether intended or not—of *a la carte* requirements. These analyses demonstrate the harms of government-imposed *a la carte* distribution.[1] Consumers, in particular, would be harmed through several different effects of government-mandated *a la carte* distribution, including the following: (1) mandatory *a la carte* distribution would very likely raise overall prices;[2] (2) consumers' viewing decisions would very likely be distorted and their ability to sample alternative networks and shows would very likely be suppressed; and (3) mandatory *a la carte* distribution would very likely harm new and niche networks,[3] which would result in fewer viewing options for consumers.[4]

- *CU/CFA submissions overstate the alleged benefits of* a la carte *distribution.* The CU/CFA submissions assert that bundling forces consumers to pay for programming they do not watch. Economic analysis of the MVPD industry, however, demonstrates that this claim is a myth.[5] This argument ignores the

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1 *See, e.g.,* Gustavo Bamberger, *Statement of Gustavo Bamberger*, July 14, 2004; Michael G. Baumann and Kent W. Mikkelsen, *Benefits of Bundling and Costs of Unbundling Cable Networks*, July 15, 2004; Thomas W. Hazlett, *The Economics of Cable TV Pricing: A La Carte v. All-You-Can-Eat*, August 12, 2004; Michael Katz, *Slicing and Dicing: A Realistic Examination of Regulating Cable Programming Tier Structures*, July 15, 2004; Michael L. Katz, *Wrong Diagnosis, Wrong Cure: An Analysis of the Claims Made by Dr. Mark Cooper in "Time to Give Consumers Real Cable Choices"*, August 8, 2004; and Bruce M. Owen and John M. Gale, *Cable Networks: Bundling, Unbundling, and the Cost of Intervention*, July 15, 2004.

2 Overall prices would be expected to rise for a number of reasons. First, overall costs would rise: distribution and marketing costs for operators and programmers would rise due to the complexity of *a la carte* distribution, while programming costs would not decrease unless programming quality significantly declined. Moreover, because of the distortions in viewer behavior that government-imposed *a la carte* distribution would induce, overall cable and DBS television viewing would fall. This fall would reduce opportunities for programmers and MVPDs to generate advertising revenues that would otherwise offset their costs. Consequently, programmers and MVPDs would have economic incentives to set higher prices.

3 "The overwhelming opposition of programmers is based on a crucial economic consideration: *each cable network needs to get its programs to where viewers can see them, and imposing a la carte will make that harder.* Providing customers with a large bundle of channels for a standard monthly fee has delivered exceedingly important efficiencies, and forcing customers to order one network at a time would eliminate those advantages." (Thomas W. Hazlett, *The Economics of Cable TV Pricing: A La Carte v. All-You-Can-Eat*, August 12, 2004 at 30.)

4 "[T]he imposition of *a la carte* pricing likely would reduce the number and diversity of available networks, or reduce the quality of programming shown on those networks (or both). For the same reasons (e.g., likely lower advertising and license fee revenues), fewer networks likely would be launched in the future." (*Statement of Gustavo Bamberger*, July 14, 2004 at 6.)

5 *See, e.g.,* Thomas W. Hazlett, *The Economics of Cable TV Pricing: A La Carte v. All-You-Can-Eat*, August 12, 2004 at 23 ("While it appears that subscribers are being charged for programs they *do not* demand, the fact is that they only pay the subscription fee if the value of the programs they *do* demand exceeds the fee. In reality, they only pay for the tier programs they desire to receive, and the cable operator throws the additional channels in for free.").

fundamental fact that it is costly to exclude a cable subscriber from receiving selected networks. In fact, once one takes into account the effects on the supply of programming available to cable and DBS operators, economic analysis shows that the use of program bundles can lead to situations in which *every* consumer *pays less* and *receives more* programming than he or she would under a mandatory *a la carte* scheme.[6]

- *CU/CFA submissions understate the costs of* a la carte *distribution.* CU/CFA offers no serious analysis of the costs of the more sophisticated set-top boxes, complex billing systems, and greater customer service demands that mandatory *a la carte* distribution would impose. In fact, as shown by numerous filings, mandatory *a la carte* would significantly increase distribution costs.
- *CU/CFA submissions consistently confuse system capacity and carriage decisions with bundling, and their projections of the effects of mandatory* a la carte *distribution on network variety are exactly backwards.* If a media conglomerate has enough bargaining power or desirable enough programming to induce MVPDs to carry multiple networks from that programmer, then those incentives exist whether MVPDs offer their programs in bundles or on an *a la carte* basis. Mandating *a la carte* distribution would do nothing to increase scarce system capacity. In fact, by diverting dollars and managerial efforts to complex and expensive billing system modifications and other changes needed to support *a la carte* distribution, mandatory *a la carte* distribution might slow the growth of channel capacity which could otherwise allow a wider array of programming to be offered to consumers. And, as noted above, there are many additional reasons why programming diversity would be harmed by mandatory *a la carte* distribution.

Confusion about the relationship between bundling and programmer bargaining power is related to another point of confusion in the debate over unbundling. So-called "voluntary" *a la carte* distribution is nothing of the sort. Under some proposals for "voluntary" unbundling, programmers would not be allowed to: (a) negotiate whether their programming was offered in tiers or on an *a la carte* basis; or (b) require MVPDs to purchase multiple networks in a bundle. Such a policy could abrogate existing contracts, thus undermining investments made in reliance on these contracts and triggering the need for costly renegotiation. Moreover, government-imposed restrictions on the freedom of programmers and MVPDs to reach contracts on terms of their choosing would very likely lead to inefficient

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6 See, *e.g.*, Michael Katz, *Wrong Diagnosis, Wrong Cure: An Analysis of the Claims Made by Dr. Mark Cooper in "Time to Give Consumers Real Cable Choices,"* August 8, 2004, Appendix.

outcomes and harm to consumers.[7] Lastly, for reasons similar to those stated in the next bullet, an unbundling requirement could lead to regulation of the prices that programmers charge to MVPDs, which would be an unwarranted imposition of government control.

- *CU/CFA's call for mixed bundling is really a disguised call for cable rate regulation.* If MVPDs were forced to offer *a la carte* options, they could do so in such a way as to induce consumers to continue choosing current bundled options. For example, an MVPD could offer a package of programming for $40 per month and offer each channel within the package on an *a la carte* basis for $35 per month per channel. Such pricing would constitute mixed bundling, which is the pricing structure the CU/CFA submissions advocate. If the aim of the mandatory unbundling proposals is to change the way MVPDs sell video programming to consumers, rather than merely to give consumers a nominal *a la carte* option, *a la carte* supporters—such as CU/CFA—are implicitly calling for some form of price regulation. It is well established that regulating cable rates is an extremely difficult process that inevitably results in unintended adverse consequences for consumers and economic efficiency.

In conclusion, sound economic analysis demonstrates that government-imposed *a la carte* distribution—whether labeled "voluntary" or not—would harm consumers, programmers, MVPDs, and overall economic efficiency. The unsubstantiated and often illogical claims made in the CU/CFA submissions do nothing to change this fact.

Respectfully,

Gustavo Bamberger
Lexecon

Michael G. Baumann
Economists Incorporated

John M. Gale
Economists Incorporated

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7 If a program network's business plan and viability depend on the network's being carried on a widely distributed tier, the network may need to be able to negotiate for the right to such carriage from MVPDs before committing to significant programming expenditures. A governmental restriction on the ability to negotiate for such assurance would thus harm the ability of the network to provide programming that consumers might highly value.

Thomas W. Hazlett
Manhattan Institute for Policy Research and
University of Pennsylvania

Michael L. Katz
University of California, Berkeley

Kent W. Mikkelsen
Economists Incorporated

Bruce M. Owen
Stanford University

Attachment 4

The FCC "Further Report" on the Retail Marketing of Video Programming Services: An Economic Review

by

Bruce M. Owen

March 28, 2006

Executive Summary

The Federal Communications Commission recently issued a "Further Report" reversing the Commission's previous conclusions about the effects on consumers of selling video programming in bundles of channels, rather than channel by channel. The Commission's reversal invites potentially disastrous increases in the costs of producing and distributing video programming, threatens to reduce the competitiveness of one of America's strongest export industries, and virtually guarantees price increases and reduced program diversity for millions of American television viewers. The Commission's basis for reversing its previous stance is an incomplete, result-oriented and misleading reading of the identical record relied upon in the Commission's earlier report.

Even if the suggestion that bundling is harmful to economic welfare was not a distortion of the economic literature, the "Further Report" ignores the further and related issues that would have to be investigated before a regulatory intervention could responsibly be considered. For example, the report ignores entirely the supply side of the market for video programming: the adverse effects of government intervention on the costs of producing, marketing, and distributing programming, the negative effects on markets reliant on the same sources of supply of programming, the effects on employment in program production, and the risks to one of America's strongest export industries. Even more remarkable, the "Further Report" pays no attention to a regulatory objective the Commission, and Congress, has held paramount for more than half a century—diversity of programming.

Bundling of goods or services is a universal marketing practice. Economists have studied the phenomenon for many years, concluding that bundling is a natural consequence of competitive as well as imperfect markets, the consequences of which vary in complicated ways according to particular market circumstances. Any given instance of bundling is at least as likely to be beneficial to consumers as a group as not, and virtually every instance of bundling, whatever its overall effects, improves the positions of some customers while worsening the positions of others. As the Commission's earlier report recognized, the economic literature provides no basis to impose government intervention in video markets to forbid bundling. The Commission in its "Further Report" distorts this economic learning, and uses selective examples to imply that bundling of video channels is necessarily harmful to consumers.

About the Author

Bruce M. Owen is the Morris M. Doyle Centennial Professor of Public Policy in the School of Humanities and Sciences at Stanford University and Director of the Interdisciplinary Program in Public Policy. He is also the Gordon Cain Senior Fellow in the Stanford Institute for Economic Policy Research. He holds a B.A. from Williams College (1965) and a Ph.D. in economics from Stanford (1970). Dr. Owen was chief economist of the White House Office of Telecommunications Policy (1971-72), and later of the Antitrust Division of the United States Department of Justice (1979-1981). He is the author of a number of books and articles dealing with the economics of regulation and media, including *Video Economics* (Harvard Univ. Press, 1992) and *The Internet Challenge to Television* (Harvard Univ. Press, 1999). The views expressed here are not necessarily those of Stanford University or any of its units.

Mr. Owen is a consultant to the economic consulting firm Economists Incorporated, which he co-founded in 1981 and of which he was CEO until 2003. This review of the FCC "Further Report on the Packaging and Sale of Video Programming Services to the Public" was commissioned by Viacom, Inc. The collaboration of Michael Baumann, John Gale, Kent Mikkelsen, and Matthew Wright of Economists Incorporated in the preparation of this review is gratefully acknowledged.

CONTENTS

Background and Summary of Conclusions

Most of the channels (video program networks) that cable and satellite operators (collectively, "MVPDs") provide are purchased by consumers as part of a package or "tier" of networks. The FCC has recently released a report on this practice titled *Further Report on the Packaging and Sale of Video Programming Services to the Public* ("Further Report").[1] The "Further Report" argues that it *may* be in consumers' interest to force MVPDs to offer networks individually on an à la carte basis, or alternatively in certain theme tiers, in addition to offering them as part of a bundle.[2] This paper reviews the FCC "Further Report" from an economic policy perspective and provides an economic analysis of mandatory unbundling of video channels for MVPDs.

The retail multi-channel video programming services industry is part of a vital U.S. industry that supplies news and entertainment to millions of consumers in the U.S. and abroad. In 2004, basic cable networks in the U.S. incurred programming expenses of roughly $12.1 billion dollars, up from roughly $2.5 billion ten years earlier.[3] Moreover, revenues from foreign sales by the U.S. motion picture, television, and video industries were estimated at $17 billion in 2002.[4] In short, U.S. video programming producers employ vast numbers of people and other resources, and the industry represents an important export market for the U.S.

The production of video programming distributed by MVPDs results from a vast set of supply and demand interrelationships. The process starts with consumers' decisions whether to subscribe to an MVPD and (assuming they do subscribe) which packages of programming to receive. A shift from bundled offerings to mandatory unbundling can affect consumers' prices for networks and thus influence subscription decisions. These

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1 "Further Report On the Packaging and Sale of Video Programming Services to the Public," February 9, 2006.

2 The terms à la carte and unbundled are used synonymously in this review.

3 Kagan Research, Economics of Basic Cable Networks 2005, pp. 16-17.

4 Steven E. Siwek, *Copyright Industries in the U.S. Economy,* Report Prepared for the International Intellectual Property Alliance, 2004, Economists Incorporated.

decisions in turn affect networks' advertising revenues and subscriber fees, as most basic cable networks are dependent on these dual sources of revenue.[5] Additionally, mandatory unbundling can have an impact on the costs associated with programming production, marketing, or distribution, all of which can affect prices to consumers and ultimately the quality and quantity of programming.

The "Further Report" has focused narrowly on the potential effect of mandatory unbundling on a subset of consumers, and even this analysis is incomplete and misleading. The "Further Report" does *not* demonstrate that MVPD consumers as a whole would be better off with mandatory unbundling. The report merely asserts that *some* consumers may pay less for MVPD services with à la carte pricing, but it does not adequately consider the effects on the remaining consumers, who would likely pay *more*.

Even if viewers in general were likely to benefit, which is unproven, it would be extremely unsound economic policy to mandate à la carte pricing of video services in the absence of a careful study of the costs and risks that would be imposed on the American program production industry and its workers, as well as the consequences for continued U.S. competitiveness in this important export sector of the American economy. There are important vertical relationships among the components of the industry, illustrated by the fact that much programming is exhibited successively through a series of media. A regulatory intervention restricting the marketing practices in one part of the industry can have unforeseen adverse consequences in other segments of the industry. The "Further Report" does not even discuss other likely effects, including consequences for the cable networks and programming input suppliers. In short, the "Further Report" gives no convincing reason why bundling in the sale of cable networks to consumers should be eliminated by legislative mandate. It would be folly to mandate a fundamental change in the operation of a major industry that touches the daily lives of most Americans on the basis of this incomplete and largely misleading report.

Specific conclusions of my analysis include the following:

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5 The term "cable network" is commonly used, even though such networks are distributed not only by cable but also by satellite and other means.

- Bundling, the focus of the FCC "Further Report," is a very common feature in the U.S. economy, rarely requiring regulation. Bundling is a particularly natural and effective means of distribution for MVPDs and programming suppliers, both of which face high up-front costs.

- Predicting the effects of mandatory unbundling, even narrowly on cable and satellite video programming service networks, is complex. Some of the most likely effects include the following:

    - Higher prices for many consumers
    - Reduced viewing of individual cable networks
    - Reduced advertising revenues for cable networks
    - Increased marketing costs for MVPDs and cable networks
    - Increased operating costs for MVPDs
    - Increased subscriber equipment costs
    - Decreased diversity in the video programming available to consumers

- Consumers choosing relatively few networks under à la carte may see their subscription fee reduced—although even these consumers may be harmed by reduced programming quality. On the other hand, consumers who enjoy watching many networks may pay more with à la carte. It is impossible to predict confidently the sizes of the "winners" and "losers" groups, although the net effects on consumers as a whole would almost certainly be negative because mandatory unbundling is likely to increase costs to cable networks, MVPDs, and consumers.

- Some of the cable networks available to consumers as part of a bundle are likely to be unavailable to consumers if MVPDs are required to offer them à la carte. Entry by new networks is also likely to become more difficult. Networks appealing to narrow audiences with specialized tastes may be hit the hardest. This would tend to reduce the diversity of programming available to consumers.

- All consumers purchasing cable networks à la carte will lose the ability to "surf" over a broad range of cable networks. This makes it harder for consumers to sample programming and find programs they would want to view and reduces their flexibility in viewing special events. It thus reduces the diversity of viewpoint to which consumers are exposed, even leaving aside the likely reduction in the number of competing networks.

- For those cable networks that survive, increased costs imposed by à la carte pricing are likely to lead to a decrease in program quality and reduced investment in programming by cable networks.

- The industry that produces first run programming for distribution through the various communication media, including motion pictures, faces a likely reduction in revenues if MVDP operators are required to price à la carte. The result will be some combination of reduced output, lower quality, and higher prices for original programming. This will have a negative effect on employment in the United States in the production of such programming and reduced export revenues.

- Finally, the Commission's proposal to implement à la carte regulation is a proposal to create a massive new set of market interventions with effects in a broad swath of the American economy. Such intervention is certain to produce all the usual attendant bureaucracy, inefficiency and market distortion that has attends price controls and regulatory systems, including in this case the likelihood of federal regulation of network and program content. The Commission's report does this without the slightest analysis of the costs of such a regime or the impact on any part of the economy.

Analysis

On November 4, 2004, the FCC released a *Report on the Packaging and Sale of Video Programming Services to the Public* ("First Report"). The "First Report" was based on a substantial record compiled by the Commission in response to an inquiry from Congress regarding the effects of program bundling. Recently, the FCC released a *Further Report on the Packaging and Sale of Video Programming Services to the Public* ("Further Report"). The "Further Report" concludes that "the First Report relied on problematic assumptions and presented incorrect and biased analysis."[6] The following analysis reviews the "Further Report" and addresses more generally issues related to mandatory unbundling of networks offered on MVPDs. It concludes that, if anything, it is the "Further Report" that "relied on problematic assumptions and present[s] incorrect and biased analysis."

Effects of Mandatory Unbundling of Retail Video Services on the Cost and Supply of Programming

Overview

Examination of issues beyond the traditional static analysis of the economics of bundling is particularly important in assessing a proposal to regulate the marketplace determination of the way video programming is packaged and priced. None of these broader issues has been raised or analyzed by the Commission in the "Further Report." To illustrate the importance of supply-side effects, consider a requirement that MVPDs offer all cable networks à la carte, either as the only alternative or in combination with various tiers. It is reasonable to expect that if a cable network were taken out of the bundle and instead offered à la carte it would lose subscribers. Most "basic" cable networks are dependent upon dual revenue streams—advertising revenues and subscriber fees—both of which in turn depend on the number of subscribers. Hence, a reduction in subscribers, holding subscriber fees and advertising rates constant, obviously would reduce revenues to the network from both sources.

In addition, a cable network taken off a tier and offered à la carte would incur additional marketing and associated costs. Marketing consists of competitive tactics, activities and resources designed to generate subscriptions to an à la carte network by stimulating consumer demand and influencing consumer choice. A cable network offered to consumers à la carte would face additional marketing costs in order to overcome the higher search and transaction costs faced by potential viewers, who would no longer have the opportunity to

6 Further Report, p. 3.

"channel surf" in search of new programming, and who could no longer rely on the incentives of cable and satellite operators to vet programming on behalf of retail customers.

Although predictions regarding specific networks are difficult or impossible, some generalizations are possible. Clearly, any loss of subscriber or advertising revenue and any increase in costs would in the first instance be likely to increase consumers' per-network subscription prices, reduce program quality, cause the exit of some networks, and limit the entry of new networks. Hence, the change in pricing would reduce the variety and breadth of programming offered to subscribers. Moreover, it would reduce what a cable network is willing to pay for original programming, syndicated off-network programming, and movies, reducing the quality of cable programming offered to subscribers as well as the quality of certain types of broadcast network programming and motion pictures.[7] Also reduced would be the revenues earned by certain program inputs with associated reductions in the quantity and quality of their output. All of these effects will serve to reduce consumer welfare.

Subsequently, competitive interactions would take place among cable networks and among MVPDs. The effects of mandatory unbundling would unfold as a multistage process, with the impact from one stage influencing the next stage. These effects are difficult to predict and would result from the interactions of a large number of economic actors. The "Further Report" does not consider the wide range of possible effects from mandatory unbundling. Difficult as these issues may be to analyze, they must be addressed and the risks of adverse outcomes assessed before regulatory intervention can be considered.

Effects on the Efficient Distribution of Programming

Almost every product and service purchased by consumers is "bundled," by sellers, from various components that could each, at least in principle, be sold or priced separately. Purchased bundles are then further combined, by customers, into useful consumption ac-

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7 Part of the cost of motion pictures and original broadcast network programming is recouped from subsequent sale of the programming through other distribution channels. If such revenues, such as syndication fees from cable networks, are decreased, creators of original programming will have to reduce production costs, and quality (attractiveness to audiences), of new productions.

tivities. Bundling occurs for a variety of reasons. Probably chief among them is that sellers can assemble parts into bundled units more cheaply and efficiently than customers. Customers get a bundled product for a lower price, which they prefer to a self-assembled product, even though the self-assembled or tailor-made product might more closely match their own special tastes. Sellers obtain competitive advantage from offering bundles of components that are cheaper and/or better suited to the demands of various consumers, and the competitive market process tends to ensure that the driving force behind the assembly of bundles is consumer satisfaction.

While bundling is a pervasive practice throughout the economy, specific characteristics of the video programming services industry help explain its widespread use among MVPDs. Production of television programming is characterized by high fixed costs, and total programming costs are invariant to the number of people viewing the program. Distribution of a network on an MVPD also involves high fixed costs but no marginal costs once the MVPD had decided to carry the network on its system. In economic terms (as the FCC "First Report" noted in its Economic Appendix), consumption of video programming is non-rivalrous, in that one person's consumption does not reduce the amount available to others.[8]

Under these circumstances, bundling can have desirable economic properties. Economically efficient pricing of non-rivalrous goods calls for pricing the goods at zero on the margin, but pricing at zero obviously would not permit cost recovery, so no production would occur. Bundling allows recovery of fixed production and distribution costs by charging households an access charge for the bundle, while encouraging widespread access to programming by allowing consumers to watch any and all networks in the bundle at no additional cost. As the FCC "First Report" notes, bundling in this context represents a form of price discrimination, which is common in industries characterized by high fixed costs and low marginal costs.[9] Thus, bundling can provide a solution to the classic eco-

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8 First Report, p. 84.

9 First Report, p. 85. See also Thomas W. Hazlett, "The Economics of Cable TV Pricing: À la carte v. All-You-Can-Eat," August 12, 2004, pp 23-24. (hereinafter, Hazlett Report)

nomic problem of financing non-rivalrous goods without restricting consumption below efficient levels.[10] It does so by permitting broader sharing of fixed costs.[11]

In the context of MVPD services, bundling also facilitates consumer sampling without requiring consumers to subscribe in advance to specific à la carte options. Many consumers today sample or "surf" across the various video options available to them, deciding to settle on a particular network based on the attractiveness of a quick sample of the programming. Bundling therefore has option value and reduces information costs for consumers, who need not predict in advance future viewing choices but rather have the freedom to quickly and costlessly access a wide range of possible viewing choices.[12] These benefits from bundling help explain the pervasiveness of bundled offerings among MVPDs, including among those that have entered more recently.[13]

Effects on Costs

Mandatory unbundling will increase the costs of delivering video programming to consumers for many reasons. The "Further Report" focuses primarily on equipment costs, and it asserts that previous analyses' concerns about these costs could be minimized by

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10 This benefit of bundling has been pointed out by numerous other commenters. See, for instance, Michael G. Baumann and Kent W Mikkelsen, "Benefits of Bundling and Costs of Unbundling Cable Networks," July 15, 2004, p. 10 (hereinafter, "Baumann and Mikkelsen Report"), and Hazlett Report, pp. 22-24.

11 Some theoretical economic literature suggests that in certain circumstances, bundling could be used to deter entry, but it is clear that the conditions under which this might be a concern are not present with MVPDs. As the "First Report" indicates, entry deterrence might be a factor if entrants cannot offer the same bundle of programming that existing MVPDs offer. However, MVPDs are generally forbidden from demanding exclusive agreements with program suppliers, and vertically integrated MVPDs are prohibited from unreasonably discriminating against other MVPDs when supplying programming (First Report, p. 86). Indeed, more recent MVPD entrants initially offered bundles of programming when they entered. See Michael L. Katz, "Slicing and Dicing: A Realistic Examination of Regulating Cable Programming Tier Structures," July 15, 2004, pp. 5-6 (hereinafter, Katz Report I). Moreover, MVPD entrants in many cases have attempted to compete by offering larger bundles of programming than incumbent cable systems. Thus, there is no basis for concern about MVPDs using bundling as a means of entry deterrence. Moreover, with the wide range of alternative bundles offered by different MVPDs—including cable systems and more recent entrants—consumers today have many alternatives from which to choose.

12 As I discuss in more detail below, bundling also promotes diversity in the viewing habits of individual consumers because it facilitates "surfing."

13 See the Hazlett Report, pp. 5-7, for a discussion of bundled offerings from more recent MVPD entrants.

imposing mandatory à la carte pricing only on digital customers. There are several reasons that the "Further Report's" analysis of a mandatory unbundling requirement limited to digital customers, and its narrow focus on equipment costs, is misleading and incomplete. [14]

First, as discussed above, unbundling substantially increases transaction costs. Consumers will have to make complex decisions about future viewing choices. Consumers will need to add networks to try them and then drop networks they do not want. Networks also may be added or dropped based on special programming events. MVPDs in turn will have to increase customer service and order processing costs.[15] These cost increases will reduce welfare, and at least a portion of these increased costs will likely be passed on to all MVPD subscribers. Mandatory unbundling would raise consumers' search costs, as viewers would seek to learn much more about future programming choices in order to optimally choose a roster of à la carte choices. Program suppliers and distributors are likely to incur substantial marketing costs in order to compete for consumer attention in a world of mandatory unbundling.

The "Further Report" simply assumes that consumers will have very good information about the content of networks before they make a choice to subscribe. The "Further Report" ignores the significant costs to programmers of providing this information to millions of potential subscribers. The "Further Report" casually dismisses the value of consumer sampling (or "surfing") in order to learn about new networks when it notes that "less than half of viewers find new channels through channel surfing."[16] Of course, this statement, if accurate, also means that almost half of viewers educate themselves about

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[14] I note that if the "Further Report" envisions mandatory unbundling only for current digital customers, its analysis does not address their concerns about the effects of bundling on MVPD customers that only receive analog service. Also, it is not clear if the proposed unbundling applies only to programming currently on the digital tier or if the "Further Report" has more ambitious designs—such as requiring that cable networks currently on expanded basic analog service would also be made available on the digital tier. The latter would require MVPDs to use system capacity to provide duplicate programming, block the analog expanded tier feed to digital homes, and require homes receiving digital signals to acquire set-top converters for all of their televisions, whereas they may currently only have one converter.

[15] See Baumann and Mikkelsen Report pp. 2-3, Hazlett Report, p. 28.

[16] Further Report, p. 26.

new networks by sampling, a learning method unavailable to consumers with à la carte pricing. With mandatory unbundling, consumers would also find it more difficult to tune in to sample a show recommended through conversations or programming reviews.

The "Further Report" also assumes, with no empirical support, that consumers will have better information about new programming than a highly motivated and experienced group of MVPD programming professionals. The "Further Report" states that MVPD distribution "indicates only the cable operator's guess about a network's likely popularity and the value it adds to the bundle, not its actual success with viewers. À la carte reflects the viewer's guess about the likelihood of watching a channel, at least as accurate a prediction of likely viewership."[17]

While acknowledging that marketing costs would be higher under mandatory unbundling, the "Further Report" naively assumes away effects of the increased costs involved in marketing to large numbers of consumers rather than the much smaller set of cable operators. The "Further Report" states that "networks would likely find new ways to market were some form of increased consumer choice allowed. While having to solicit subscribers directly could raise networks' marketing and advertising expenses, countless products in numerous markets manage to establish one-on-one relationships with consumers."[18] This statement completely ignores the evidence in the record of the very large marketing costs incurred by premium channels. In reality, cable networks will face additional marketing costs, once unbundled, because they must now sell their programming to consumers as well as to MVPDs. Each network must compete with dozens, if not hundreds, of other networks for the consumer's selection. The network as a whole would have to be marketed, not just specific programs.

One way to estimate the transactional and associated marketing costs that would be incurred were a cable network to be offered à la carte instead of as part of a tier is to consider the number of subscribers to the network and the churn rate. Churn is defined as the

[17] Further Report, pp. 24-25.

[18] Further Report, p. 27.

percentage of households that discontinue their subscription to the network each month. If a network wants to maintain its number of subscribers, much less grow, it must replace those subscribers it loses to churn. Churn rates can be substantial.[19] For instance, Showtime Networks determined that the average monthly churn rate in 2004 for Showtime, The Movie Channel, HBO, Cinemax and Starz is roughly 5.9 percent.

Consider a network with 25 million à la carte subscribers, or about 27 percent of MVPD households.[20] If the network's monthly churn rate is the same as that for those five premium networks, 5.9 percent, then the average annual "replacement" connects needed just to maintain the subscriber base are 17.7 million households. Using an estimate of $16.90 in costs per connect, the annual transactional and associated marketing costs incurred by the network would be about $300 million just to maintain its subscription level of 25 million—or roughly $1 per subscriber per month.

Adverse Effects in Wholesale Program Markets

Although the FCC has long studied regulatory issues in wholesale programming markets, these markets are hardly addressed in the "Further Report." The FCC analysis focuses on how consumers might be affected by unbundling. The impact on program suppliers or the exact response of program suppliers to changes in the retail pricing and marketing of their networks is not studied in detail.

A program supplier's optimal promotional and marketing strategy and its associated pricing decisions would likely differ if its network is sold à la carte rather than as part of a tier. If a programmer's network is offered à la carte to some customers and as part of a tier to other customers the programmer may need two different advertising messages and marketing campaigns. Indeed, the programmer may be in a difficult position because the programming would need to appeal to the à la carte consumer and to the tier consumer,

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19 Bruce M. Owen and John M. Gale, "Cable Networks: Bundling, Unbundling, and the Costs of Intervention," July 15, 2004, pp. 39-40 (hereinafter, "Owen and Gale Report").

20 As of June 2005, there were 94.2 million households in the U.S. that subscribed to an MVPD. (FCC *Twelfth Annual Report In the Matter of the Status of Competition in the Market for the Delivery of Video Programming*, March 3, 2006), p. 4.

and the optimal type of programming to reach theses two types of consumers may be different.

Selling national advertising time on the network may also be more difficult. The Baumann and Mikkelsen Report indicates that networks can experience disproportionate jumps in advertising revenue as their subscribership increases. That report notes that a cable network needs a subscriber base of roughly 50 million homes before national advertisers consider purchasing time on it.[21] Moreover, the Baumann and Mikkelsen Report demonstrates that even more substantial relative advertising revenue increases occur when networks gain roughly 70 to 80 million subscribers, which they attribute to the desire among advertisers for unduplicated reach.[22] These findings suggest that certain cable networks may suffer extremely large drops in advertising revenue if its program service is not marketed uniformly (i.e., on the same type of tier) by most MVPDs. Such a loss of revenue may, in turn, threaten some networks' survival.

There are other potential costs to program suppliers from mandatory unbundling. Programmers are likely to experience greater uncertainty in revenues in an à la carte pricing world. Currently, if a network obtains carriage on an MVPD it is assured a level of license fee revenue. In contrast, under an à la carte structure obtaining carriage does not guarantee any level of revenue. Moreover, a network's revenue would likely be more volatile under à la carte because it is likely that consumers would add and drop channels to which they subscribe. A significant increase in a programmer's uncertainty about revenues over the level of uncertainty that programmers now experience can affect programmers' production costs in several ways. First, uncertain revenues make the programmer's business more risky. Higher risk, in turn, normally translates into a higher cost to attract financing. Higher financing costs could deter some networks from entering or make existing marginal networks unsustainable.

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21 Baumann and Mikkelsen Report, pp. 9-10. Baumann and Mikkelsen attribute this to increased accuracy in measurements of audience size as subscribership increases, and to the fact that the 50 million threshold represents roughly 50% of U.S. television households.

22 Baumann and Mikkelsen Report, p. 8.

Similarly, greater uncertainty about revenues will reduce networks' ability to enter into long-term commitments. Shorter commitments to input suppliers, such as talent and production services, may tend to raise the average cost of acquiring those services to compensate for greater uncertainty and permit them to recover fixed costs over a shorter period. Shorter commitments to MVPDs may reduce the demand for the programmers' product and may reduce the amount of promotional activity that MVPDs are willing to undertake. If increased revenue uncertainty reduces programmers' ability to enter long-term commitments with input suppliers and distributors, this will also tend to make networks less profitable, possibly causing some networks to exit or not to enter.

That a move to mandatory unbundling would likely harm programmers is demonstrated by nearly unanimous opposition both by established programmers and less established networks. The Hazlett Report summarizes the positions of dozens of program suppliers.[23] As Hazlett writes:

> The overwhelming opposition of programmers is based on a crucial economic consideration: *each cable network needs to get its programs to where viewers can see them, and imposing à la carte will make that harder.* Providing customers with a large bundle of channels for a standard monthly fee has delivered exceedingly important efficiencies, and forcing customers to order one network at a time would eliminate those advantages. (Emphasis in original)[24]

Effects on Entry

With mandatory unbundling, new entrants would have a more difficult time in attracting viewers than at present. Currently, new entrants can rely on easy consumer sampling of their programming once an MVPD includes them in a tier of programming networks. With mandatory unbundling, subscribers would not be able to easily sample or "surf" their programs, but would instead have to commit in advance to a network subscription in

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23 Hazlett Report, Table 10.

24 Hazlett Report, p. 30.

order to view an entrant's programming. Consumers must therefore overcome potentially high information costs to be convinced to subscribe. Doing so would require increased expenditure on up-front and continuous advertising and promotion by the entrant. These potentially large up-front expenditures, which are a sunk cost that would not be recouped if the entrant does not survive, may discourage entry.

Effects on Diversity

An important policy issue concerns whether the overall number of cable networks will increase or decrease as a result of unbundling. As with the issues addressed above, a more extensive and speculative modeling effort would be required to answer these questions precisely. It is clear, however, that the short-run or partial equilibrium effect of unbundling would be to reduce the number of networks.

Mandatory unbundling of video services will reduce the diversity of programming available to viewers, thus undermining a policy goal that has been so important both to the Commission and to Congress for the past half-century that it has been pursued in spite of possible costs to consumers. The number of networks would likely decrease because of both decreasing revenues and increasing costs for individual cable networks required to be unbundled, as detailed in the above discussion. As is well known, currently many cable networks are, for a variety of reasons, unprofitable or marginally profitable. At least some of these networks will be forced out of existence by unbundling.[25]

Mandatory unbundling would likely impose a particularly high burden on niche programmers, as networks appealing to relatively narrow segments of the population are likely to experience particularly large declines in subscribership. Michael Katz describes how dozens of niche networks, many catering to minority communities, have filed comments opposing mandatory à la carte. Many have commented that while they can thrive

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[25] Further, it is possible that there would be a reduction in aggregate expenditure on programming by the surviving networks, which would presumably result in a reduction in average program quality.

as part of a broad, diverse tier, their very existence would be in question if they were forced to compete as an à la carte offering.[26]

Even leaving aside the likely reduction in the number of competing networks, mandatory unbundling is likely to reduce the diversity of programming to which consumers are exposed. With bundling, as I have discussed, consumers can sample or "surf" across the various video options available to them, deciding to settle on a particular network based on the attractiveness of a quick sample of the programming. This facilitates the opportunity for content suppliers to compete for viewer attention across disparate sources and genres. The Baumann and Mikkelsen Report identifies numerous instances in which specific events or especially topical programming has produced spikes in viewership for certain networks.[27] Mandatory unbundling will likely reduce the diversity of consumers' viewing habits by limiting their ability to view special events.[28]

Curiously, the "Further Report" expresses a belief that more programming may not be desirable, in contrast to the long-standing goal of the FCC in promoting diversity of ideas and views. It states that "the First Report ignores the impact of such a mechanism on the amount of programming that is produced; i.e., it assumes that because programming is produced it should be widely distributed, without considering whether *the appropriate amount* of programming is produced."[29] (Emphasis added.) The "Further Report" appears to describe the potential demise of niche networks as a positive result of à la carte pricing. "As discussed below, à la carte pricing could weed out those networks that consum-

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26 Michael L. Katz, "Wrong Diagnosis, Wrong Cure: An Analysis of the Claims Made by Dr. Mark Cooper in 'Time to Give Consumers Real Cable Choices,'" August 8, 2004, pp. 25-27 (hereinafter, "Katz Report II").

27 Baumann and Mikkelsen Report, pp. 4-6.

28 A more recent example of consumers choosing to view a network after sampling occurred during the Winter Olympic Games. MSNBC carried the Olympic sport of curling and saw a huge increase in viewers, "MSNBC averaged 1.6 million viewers for its U.S.-U.K. curling match, which NBC Universal said was its highest viewership delivery since the Iraqi war coverage on April 6, 2003." *The Hollywood Reporter*, February 22, 2006. It is unlikely that this increase would have been forecast by NBC or consumers, "For example, curling on CNBC from 5 to 8 p.m., Eastern, Monday through Wednesday generated a rating that is 67 percent above what CNBC produced for various sports during the 6 p.m. to midnight period during the Salt Lake Games." *The New York Times*, February 17, 2006..

29 Further Report, p. 16.

ers value at less than the networks' costs, thereby shifting some viewers to more valuable networks."[30]

The "Further Report" also claims that a popular network could have increased viewership with à la carte pricing due to the loss of variety to consumers. It states that "if a large percentage of consumers choose to purchase a channel, then the channel's subscriber base would be relatively unchanged, and *with fewer alternative channels to surf through,* we would expect consumers purchasing the channel to watch it with greater intensity."[31] (Emphasis added.) The "Further Report" does not appear to support the position that increased diversity is a benefit that may be worth some extra cost to some consumers.[32] Again, this appears to be at odds with the Commission's traditional support for programming diversity.

The Same Analysis Applies to Theme Tiers and Mixed Bundling

The "Further Report" also raises the possibility of mandating theme tiers. There are several problems with mandating theme tiers. First, to the extent that MVPDs compete with one another (there are now at least three major MVPDs, and sometimes more, available to nearly every consumer), a theme tier requirement would constrain the industry away from its competitive equilibrium. Policymakers generally accept the legitimacy of competitive market outcomes, if not because such outcomes optimize consumer welfare, then because there is no basis for improving matters with a regulatory intervention. In this case, forcing MVPDs to market their services in a way that differs from the strategy that best serves consumer demand seems likely to reduce economic welfare.

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30 Further Report, p. 25.

31 Further Report, p. 8.

32 Later, the Further Report provides an example where bundle pricing increases the incentives of a cable operator to carry niche programming, "As Example 4 shows, an MVPD may prefer to add niche programming that appeals to a small set of subscribers rather than add additional mainstream programming if existing mainstream programming is sufficient to attract the mainstream consumers." (Further Report, p. 32) Interestingly, the Further Report also reports the diametrically opposite result that MVPDs will have less incentive to carry niche programming when bundling: "As shown below, networks with small, dedicated audiences may not be appealing to MVPDs providing bundles, because they may not generate enough revenue to MVPDs to be profitable to carry." The Further Reports therefore claims that when bundling, an MVPD has less incentive to carry niche networks and less incentive to carry broadly popular networks. It appears unusual that both effects could be true simultaneously.

More generally, government-mandated tiers entail many of the same problems as à la carte pricing. Mandated tiers would reduce subscriber and advertising revenues because of reduced circulation for each network included on a tier that was not chosen by all current subscribers. Dividing the basic bundle into tiers would require consumers to pay for set-top boxes as with à la carte pricing of networks. Tiering would increase marketing, transactional, and customer support service costs. Transactional costs may even be higher than with à la carte pricing because a programmer would have to convince consumers to subscribe not just to its network, but to some tier of programming that will likely differ from one MVPD system to another. Indeed, a programmer's transactional expenditure will benefit not only itself, but whatever networks it is packaged with on the tier. Strategic interaction among networks in each tier might result in promotional expenditures greater or less than optimal levels.

Another proposal contained in the "Further Report" is "mixed bundling," whereby an MVPD must offer all the networks à la carte as well as in a bundle. Again, breaking networks out of a tier taken by all subscribers would reduce a network's subscriber and advertising revenues because of reduced circulation for the network, with attendant effects on entry and diversity. Offering any of the networks à la carte would also require consumers to pay for set-top boxes and would lead to increased marketing, transactional, and customer support service costs.[33] Thus, the effects of mandatory theme tiers or mixed bundling are likely to be directionally equivalent to other forms of mandatory unbundling.

While it is difficult to predict how *much* programming markets will be affected by mandatory unbundling, it seems clear that the likely effect would be to reduce the supply of programming, raise entry costs, and reduce programming diversity. These changes may in turn have wide-ranging effects. For instance, the reduction in programming production will certainly affect inputs into cable programming production. Perhaps less obvious are the potential effects on other related markets. How would advertisers be affected by a re-

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[33] In a mixed bundling regime, consumers who subscribe to the bundle may not need a converter box.

duction in the quantity and diversity of cable network programming? What would be the impact of reduced windowing opportunities for certain programming? What effect would mandatory unbundling have on the export of U.S. produced video programming, as a result of the almost certain reduction in quality and supply of such programming?

These and many other important questions are unexplored in the "Further Report." A major regulatory intervention such as mandatory unbundling should be based not only on a strong showing that the economics of bundling supports such a change, but also on a showing that all affected markets are not unduly disrupted, and that other policy goals are not unduly threatened. The "Further Report" meets none of these requirements. It would be irresponsible to propose this radical change without carefully considering the potentially wide-ranging effects in all of the markets involved in cable program production. Regulatory interventions, once instituted, are difficult to reverse.

The "Further Report's" Unsound Analysis of the Welfare Economics of Bundling

The one relevant subject that the "Further Report" does attempt to address is the welfare economics of bundling video services. In deciding whether the "Further Report" provides a basis for a major policy intervention such as mandatory unbundling, an important issue is the MVPD practice of offering bundles or tiers of services to retail subscribers. Does this practice harm or benefit consumers? More specifically, what would be the effect on the economic welfare of cable networks and consumers of a regulation requiring MVPDs to offer all programming à la carte, either by network or by program, with or without continued bundling?

The first part of this question was addressed at a conceptual level above and in the many economic analyses submitted in the record before the FCC. Bundling is a universal feature of the economy, and greatly improves consumer welfare by enabling consumers to share the fixed costs of creating goods and services from component parts.[34] Based on current knowledge, there is no more reason to assume that bundling of cable networks

[34] Nevertheless, it is possible to construct hypothetical circumstances in which bundling is harmful. These circumstances are technical, not easily characterized, and differ from one market to another.

into tiers is harmful to consumers than it would be to assume that bundling individual programs into schedules (i.e., networks) is harmful, or that bundling tires with new cars is harmful.

The "Further Report's" Incomplete Analysis of Effects in Retail Markets

The "Further Report" attempts to address this issue, in large part, by revising some of the assumptions of a Booz Allen Hamilton study.[35] The "Further Report" focuses myopically on an alleged numerical error in a Booz Allen study, itself a small part of the record, without giving adequate consideration to the comments and analyses of numerous other parties. (This review does not directly analyze or rely upon the Booz Allen study, except to note that the work of many other commenters provides ample support for its core conclusions.)

At a more conceptual level, it is inappropriate for the "Further Report" to infer consumer benefits simply by comparing costs of a large bundle of networks with the potential costs of a smaller set of à la carte networks. As noted above, a large bundle of networks is likely to be inherently more valuable than a smaller set of networks sold on an à la carte basis because a household derives value from the option to engage in "channel surfing" and from those occasions when it chooses to sample programming that does not appear on its regularly viewed networks. Therefore, the simplistic cost comparison between bundled and à la carte offerings overstates any potential consumer benefits from the latter.

Even putting aside these flaws, the "Further Report" suffers from a more fundamental shortcoming. The "Further Report" concludes that some consumers *may* be better off under mandatory unbundling. In doing so, the "Further Report" arguably does nothing more than make the obvious point that in the economics literature there are results where bun-

[35] Booz Allen Hamilton, "The A la Carte Paradox: Higher Consumer Costs and Reduced Programming Diversity, July 2004 (hereinafter "Booz Allen study").

dling can either benefit consumers or harm consumers.[36] In a recent paper Timothy Brennan summarized this point:

> "The economics of bundling has a long and complex history, characterized mainly by a set of results that focus on price discrimination. As with the price discrimination literature generally, bundling has been regarded as a practice with highly ambiguous consequences. Analyses of bundling by monopolists are either indeterminate or depend heavily on virtually unobservable variables such as correlations of inframarginal valuations across bundled products."[37] [footnotes omitted]

The "Further Report" provides no basis for a policymaker to determine the likelihood that any significant number of consumers might benefit from mandatory unbundling. The "Further Report" offers no new data or empirical observations of "correlations of inframarginal valuations" that would support a claim that mandating à la carte pricing would benefit consumers. Thus, the "Further Report" proposes a major regulatory intervention in the competitive marketing practices of a key industry simply on the basis of the observation that mandatory unbundling might benefit a subset of consumers that prefer to purchase few channels and who might therefore have a lower total video programming bill with à la carte pricing.

In making this argument, the "Further Report" does not acknowledge that even if some consumers were better off, other consumers would almost certainly be worse off. When consumers purchase a bundled tier of networks from an MVPD, they pay a single price for the bundle but no explicit price for the individual networks contained in the bundle. In contrast, an à la carte pricing system necessarily imposes a positive price on viewing additional networks.[38]

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36 "For example, results in the economics literature show that a change from bundled pricing to à la carte may either increase or decrease economic efficiency…" p. 15.

37 Timothy J. Brennan, "Competition as an Entry Barrier? Consumer and Total Welfare Benefits of Bundling," AEI-Brookings Joint Center for Regulatory Studies, Working Paper, June 2005, p. 1.

38 In addition to the explicit price for subscribing to an additional network, there would be implicit associated transaction costs.

This change in the pricing structure for video programming is so dramatic that current consumer behavior regarding basic networks provides virtually no information about behavior in an à la carte pricing world. Specifically, it is difficult to estimate what portion of consumers would choose to subscribe to a given network at various alternative à la carte prices set by their MVPDs. The effect is likely to differ across networks, may vary depending on whether the network provides niche programming or general interest programming, and may depend on the number of other networks that offer a similar type of programming.

The available evidence is not sufficient, even leaving aside the general disequilibrium into which the entire industry would be thrown by mandated unbundling, to predict exactly what prices would prevail for individual networks in a pure à la carte pricing world. Nonetheless, it seems clear that the loss of subscribers will impel networks either to lower programming quality or increase fees for those viewers that continue to purchase the programming, or both.[39] It does seem reasonable to expect, therefore, that any MVPD subscriber who sought to subscribe to the same array of networks now available on any given tier would pay more, and quite likely much more (because of the lost advertising support and increased marketing costs) to receive the current quantity and quality of programming, and that is indeed the result that emerges from the modeling exercise presented in the Appendix to this report. Based on a simple model, I estimate that the average retail price of a basic cable network will be 9 to 20 times higher than it is currently if mandatory unbundling is required. The model indicates that consumers who subscribe to a moderate or large number of networks will end up paying more, while consumers who subscribe to only a few networks may pay less. In other words, mandatory à la carte pricing would tend to harm those consumers who take advantage of the diversity in program content that the Commission has encouraged for its entire history. However, in the longer

[39] Indeed, average per-subscriber license fees *must* increase if a network is to maintain existing programming expenditures and cash flow as subscribership and advertising revenues fall. Moreover, as mandatory unbundling leads to the loss of viewers least interested in watching particular networks, target audiences may narrow for networks, and programmers' rational pricing strategy may be to boost license fees as a result. On this point, see Katz Report I, pp. 16-17.

run, there is no guarantee that any of the networks preferred by either group will remain in existence, nor that the same level of investment in its programming can be expected.

The prediction of the average retail price for a basic cable network does not account for some important but immeasurable factors, such as consumer demand for individual networks and future competitive interactions among cable networks and among MVPDs. Predicting what will eventually happen, to what extent, and to which cable networks, is complicated by the fact that a rule requiring a change in marketing practices would affect all MVPDs, nearly all program suppliers and nearly all networks. Nevertheless, the lost advertising revenues and higher costs associated with à la carte pricing are likely to persist in the long run, and to result in a permanent reduction in aggregate welfare.[40]

The Hypothetical Examples in the "Further Report" are Misleading

The "Further Report" presents specific, tailor-made hypothetical examples of cases in which mandatory unbundling improves welfare. There is no empirical basis for believing these hypothetical examples are more representative of reality than others with opposite effects. For instance, the example in Figure 1.a in the Economic Appendix to the "Further Report" suggests an instance in which bundling results in a transfer from consumers to the cable operator—albeit with no associated economic inefficiency. If in this example one assumes the cost of each network is \$7 instead of \$6, then it is immediately apparent that neither network would be supplied with a mandatory à la carte pricing scheme. Instead, in this simple counterexample bundling is necessary to ensure provision of both networks—an economically efficient result, given that the total value consumers place on these networks exceeds their costs.

[40] The proposed interventions are likely to reduce the size of the economic pie available to be shared by all consumers. However, despite the smaller overall pie, some consumers may be better off as measured by their surplus from consumption of MVPD services. The predicted reductions in overall welfare implicitly give equal weight to each consumer. This assumption is justified by the absence of any apparent correlation between those likely to benefit from unbundling and the characteristics traditionally associated with unequal weighting of income. In this respect mandatory unbundling resembles an economically inefficient tax that transfers income from one randomly selected group of consumers to another, reducing GNP in the process.

It is simple to construct additional counterexamples to the hypothetical cases that appear in the Economic Appendix to the "Further Report." For instance, Figure 6 purports to demonstrate that bundling could result in "an oversupply of economically inefficient programming" based on a numerical example which suggests bundling could lead an MVPD to carry a network with an aggregate consumer value below its cost. Note that if the cost of network Y in this example were changed from $9 to $7, and all other values in the example remained the same, then it would not only be economically efficient to offer the network, but the network would only be offered through bundling.

Similarly, Figure 7 of the "Further Report" purports to demonstrate that bundling may lead to an inefficient oversupply of quality, because this example results in a hypothetical quality expansion, the value of which exceeds its cost. If, all else equal, one hypothesizes that the cost of the quality improvement was $1 instead of $3, then it is efficient to increase the quality of this network, and the cost of this improvement could only be recovered through bundling.

These counterexamples do not demonstrate that bundling *always* results in the optimal supply of networks or programming quality. Rather, they simply show that a small number of tailor-made examples, such as those that appear in the Economic Appendix to the "Further Report," do not demonstrate the likelihood of a welfare improvement from mandatory unbundling, and they certainly provide no justification for a radical regulatory intervention such as that envisioned in the "Further Report."

If the examples in the Economic Appendix do anything, they demonstrate that an MVPD generally has incentives to offer certain networks on an à la carte or mini-tiered basis if the provision of such programming is economically efficient. The examples in Figures 3 and 5 purport to demonstrate the inefficiency of bundling, but pure bundling is unlikely to represent an equilibrium. In both of these cases, as the report acknowledges, an MVPD (and the program supplier) would have an incentive to offer an individual network (network Z) on an à la carte pricing basis along with a bundle. Similarly, in the example in Figure 4, a profit-maximizing MVPD would have an incentive to bundle the mainstream networks for sale to the mainstream consumers, while offering the two niche networks on an à la carte basis for purchase by the "niche" consumers. Finally, the example in Figure 8 demonstrates (as the "Further Report" acknowledges) that an MVPD would have an incentive to offer a theme tier in addition to its regular tier under certain conditions.

These examples do not demonstrate the superiority, from a policy perspective, of mandatory unbundling or theme tiers. Rather, they suggest that MVPDs already have the incentive to offer efficient alternatives to pure bundling under certain conditions. Indeed, the "Further Report" (¶¶ 84, 93) notes that MVPDs currently offer some à la carte and theme tiers. Notably absent from the "Further Report" is a convincing discussion of structural impediments that would prevent a profit-maximizing MVPD from offering alternatives to bundling if these alternatives were efficient.

The Economic Appendix to the "Further Report" suggests two reasons that MVPDs may not voluntarily offer additional options such as mixed bundling or theme tiers even if such choices were preferred by consumers. One reason is that providing additional options, while potentially beneficial to consumers, would not be profit maximizing to an MVPD. While this is a theoretical possibility, the "Further Report" has provided no analysis suggesting that it is likely to be true (and, as indicated previously, its narrow examples provide no basis to support such a conclusion). The second reason given is that even where à la carte pricing would be profit maximizing, contracts with program suppliers may limit their ability to offer such options.

There is little evidence in the record to determine the extent to which contracts negotiated between MVPDs and program providers restrict carriage of networks on particular tiers. Assuming such restrictions exist, however, the "Further Report" provides no economic explanation as to why MVPDs and program suppliers would negotiate such restrictions if it would not be in their collective interest to do so. For several examples in the Economic Appendix, such restrictions are not jointly profit maximizing for the MVPD and the program suppliers.[41] This suggests that MVPDs and networks would have an incentive to negotiate alternatives to pure bundling in such instances. If, in fact, some contracts provide incentives for MVPDs to offer specific networks only in tiers, it is reasonable to believe that there are some joint benefits to this arrangement for MVPDs and program suppliers. For instance, bundling may reduce the costs to the MVPD of offering the network to customers, or it may allow the program supplier to benefit from increased advertising revenues. These potential benefits are completely assumed away in the "Further Report's" simplistic numerical examples, and their absence calls into question whether the examples offer any guidance whatsoever to a policy maker that is considering the effects of mandatory unbundling.

Mandatory Unbundling Would Likely Lead to Price or Content Regulation

Finally, it is important to understand that most of the questions about mandatory unbundling cannot be answered meaningfully without considering the *prices* at which various components and bundles are offered, a daunting task. With mandatory mixed bundling, in which MVPDs are required to offer as à la carte options all networks available in the bundle, it is easy to imagine that, absent pricing regulation, MVPDs would price à la carte options at a level that would discourage their choice by most consumers. This conclusion follows from the fact that MVPDs and program suppliers are not currently prohibited from offering mixed bundling, yet one rarely observes such offerings.[42] Given this, it is reasonable to presume that MVPDs would have an incentive to favor the status quo.

This, more ominously, leads fairly directly to the conclusion that mandatory unbundling is likely to be ineffectual if it is not accompanied by regulation of prices. Of course, mandatory à la carte pricing is itself a form of price control. But policing such a requirement

41 The Further Report acknowledges this point: "In example 3,4,5, and 8 below, a profit-maximizing MVPD would prefer to offer mixed bundling, combining bundles with à la carte, or themed tiers, but might not do so based on contractual obligations." (Further Report, p. 50) Elsewhere, the Further Report makes the simplifying assumption that the MVPD makes its decisions to maximize the joint profit of the MVPD and the networks. (Further Report, p. 48)

42 As Michael Katz notes, the fact that we do not commonly observe mixed bundling in the MVPD context suggests that the transaction costs associated with it are prohibitive. See Katz Report I, p. 13.

will inevitably require a deepening federal involvement in pricing details, such as the relationship between tier prices and individual network prices, and regulation of content, because of the need to police tier definitions.

Recent price regulations by the Commission (e.g., those in the telephone industry) are, from a technical economic point of view, almost trivial in comparison with what the Commission would face in determining regulated prices for intellectual property whose consumption is non-rivalrous. Efficient telephone component pricing focused on long-run forward-looking incremental cost, with controversy centering on which stakeholder would bear the burden of unrecovered historical costs. In video programming, the Commission would be faced with an economically efficient price (from a demand-side perspective) of zero, but with a potentially large positive price required to induce production of the next day's programs. The incentive effects of stranded costs would not be a side show; they would be the whole show. [43]

Recent history clearly demonstrates the large unintended consequences that can result from price regulation. The deregulation of cable 1996 was in large part intended to remove the distorting effects of price regulation imposed just a few years earlier. In a 1997 study of cable television reregulation of the early 1990s, Hazlett and Spitzer noted the following: "In cable the private system operator's ultimate right to regulate investment flows, to shift marketing efforts, and to control the programmed content of what is offered on the basic cable package compounds the regulator's burden beyond whatever general difficulties arise in monitoring and regulating service quality. The task becomes unworkable. That is the alternative vision of price regulation."[44] Hazlett and Spitzer conclude by saying the following:

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43 The "Further Report" seems to accept that there will be effective price regulation of the à la carte prices with a mixed bundling structure. "Under mixed bundling MVPDs might have an incentive to set the à la carte prices high, in order to induce customers to buy the bundle" (Further Report, p. 39). This implies that in order for consumers to reap the claimed benefits of a carte pricing, prices would have to be regulated to ensure that the à la carte prices are low enough to induce some significant portion of subscribers to opt for à la carte selections.

44 Public Policy Toward Cable Television, Thomas W. Hazlett and Matthew L. Spitzer, The MIT Press, Cambridge Massachusetts, London, England, 1997, pp. 206-207.

> The challenge of those that would reinvent rate regulation is significant. Whereas price competition has demonstrably led to increased consumer satisfaction in those cable markets where it has flourished, the market failure of price controls should inform the debate over regulation more generally. The evidence suggests that the burden of proof be shifted: whatever difficulties are involved in promoting competition in the near term, it is rate regulation that must prove its viability, even as an interim substitute. Through the experiment of deregulation in the 1980s and the reverse experiment of reregulation in the 1990s, rate regulation of cable television systems has yet to do so.[45]

In addition to potential price regulation, theme tiering might spur *content* regulation. That is, mandatory theme tiering is not a content-neutral regulatory intervention. Under theme tiering it would be necessary to determine specifically what networks would appear on various tiers, and it is unclear who makes these difficult network placement decisions.[46] Defining tiers by theme is complicated by the fact that networks are themselves bundles of (often diverse) programming, so decisions about whether networks belong on tiers intended to follow particular themes would not be straightforward. More fundamentally, the essence of this kind of intervention is to organize content in a way different from the way the MVPD would like to organize and market it. This raises constitutional objections that the Commission and the courts would have to address.

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[45] Hazlett and Spitzer p. 217.

[46] That is, theme tiering raises the issue of whether the MVPD controls how many tiers are offered and what is carried on each tier or if this is left to regulators or the courts.

APPENDIX: A Simple Model of Pricing Impact from Mandatory Unbundling

A complete general equilibrium model of consumer demand, network programmer supply, and MVPD system pricing is beyond the scope of this paper. But in order to provide some gauge of possible impact on consumer prices, this Appendix, which first appeared in a 2004 report I wrote, develops a simple model of the effect on subscriber prices of imposing à la carte. In this model, I do not check to see whether the resulting predictions of prices are consistent with a competitive equilibrium. While I have made some simplifying assumptions in order to arrive at my estimates, the results are nonetheless instructive.

The analysis that follows focuses on the 110 cable networks for which Kagan Research provides 2003 data.[47] The analysis begins with an assumption as to the percentage of current subscribers that would continue to subscribe if à la carte pricing were required. I select three different subscriber retention rates: 10 percent, 20 percent, and 30 percent.[48]

For the reasons discussed above, there is likely to be a loss of advertising revenue if unbundling is required. In order to account for the effect of lost advertising revenue on wholesale cable pricing, I select three different levels of advertising revenue retention: 80 percent, 60 percent, and 40 percent. The assumption is that those consumers who continue to subscribe to a particular cable network with à la carte pricing are the core viewers of the network. Hence, regardless of how many subscribers are retained, it is likely that the percentage loss in advertising revenue will be less than the percentage loss in subscribers.

Programmers also are likely to incur additional marketing costs if à la carte pricing is imposed. In order to account for that effect on wholesale network pricing, I estimate the additional transactional marketing and associated costs of each network. I assume that a network's monthly churn rate is the same as that for the existing premium networks, 5.9

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47 Kagan Research, Economics of Basic Cable Networks 2005: Key Spreadsheets, June 2004.

48 These values seem to cover the reasonable range of subscriber retention given the current take rates of the premium cable movie networks.

percent, and that the average transactional marketing and associated costs are about \$16.90 per connect per year. Therefore, the additional expense the network incurs to replace those subscribers it loses to churn is about \$1.00 per subscriber per month.[49]

In the real world, networks can respond to unbundling in a variety of ways. To facilitate an illustrative analysis, I assume that networks will raise license fees in order to offset any decline in subscriber or advertiser revenues and any increase in marketing costs, rather than lowering program expenditures. These assumptions permit me to calculate a network's wholesale price (license fee) to the MVPD systems. I then assume that MVPD systems apply a uniform 90 percent markup over wholesale price to calculate each network's à la carte retail price.[50]

Using these assumptions, I estimated à la carte retail prices for each of the 110 networks. I then compute the average price of a network with à la carte pricing.[51] The results are presented in the table below. For example, assuming that networks increase subscriber fees to recover lost subscriber and advertising revenue and increased transactional marketing costs, that networks retain 30 percent of their subscribers and 80 percent of their advertising revenue, and a 90 percent markup of the wholesale price, the average price of a network with à la carte pricing would be \$3.39.

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49 The annual cost to replace subscribers lost to churn equals \$16.90 × 5.9% × 12 × subscribers. Therefore, the cost per subscriber per month equals \$16.90 × 5.9%, or about \$1.00.

50 The assumption of 90 percent markup appears to be in line with recent MVPD markups. NCTA estimated 2003 basic cable subscriber revenue at \$28.962 billion and 2003 premium subscriber revenue at \$5.192 billion. (NCTA, *Cable Developments 2004*, p. 14.) Basic cable subscribers were reported at about 73.4 million in 2003. (NCTA, p. 8.) This implies basic and premium subscriber revenues of \$38.79 per subscriber per month. In its 2002 cable industry survey, the FCC found that the average price of the basic service tier was \$14.45. (FCC, *Report on Cable Industry Prices*, MM Docket No. 92-266, July 8, 2003, at Table 1.) This implies that subscribers paid about \$24.34 per month for the programming beyond the basic service tier. Total cable programming expenditures, including license fees, copyright fees and investments in local original programming, was estimated at \$11.46 billion, or \$13.02 per basic subscriber per month. (NCTA, p. 13.) The markup of \$11.33 over programming costs implies an estimated markup of 87 percent. This estimate understates the actual markup. The basic service tier often includes some basic networks, so some of the \$14.45 should be considered payments to networks. The payment to networks or \$13.02 is overstated because programming expenditures include local programming expenditures. Making these adjustments would increase the estimated markup.

51 Throughout this appendix, the average price of a network is computed as the subscriber-weighted average price of the 110 networks included in the analysis. All prices reported are retail prices.

Weighted average retail price of a network with à la carte pricing

Advertising Revenue Retention	Subscriber Retention 30%	20%	10%
80%	$3.39	$4.13	$6.37
60%	$3.61	$4.46	$7.03
40%	$3.83	$4.79	$7.70

In contrast, currently the average retail price of a network is $0.38.[52] Hence, after unbundling, the average retail price of a network is estimated to be 9 to 20 times higher than it is currently.

The mechanism for this result is clear: as either the advertising revenue retention rate or the subscriber retention rate falls, the average retail price of a network increases. A decline in subscriber retention rates from 30 percent to 20 percent, holding the advertising revenue retention rate constant, increases the average price of a network by slightly less than $1.00, but a decline from 20 percent to 10 percent increase the average price of a network by over $2.00 to almost $3.00. If the advertising revenue retention rate declines from 80 percent to 60 percent, holding the subscriber retention rate constant, the average price of a network increases by 22 cents to 66 cents; a decline from 60 percent to 40 percent has the same effect.

At the mid-point of the ranges considered—20 percent subscriber retention and 60 percent advertising revenue retention—the average price of a network is $4.46. At this price, the average cost per subscriber (exclusive of the basic tier fee and converter box fee) for 10 à la carte networks would be $44.60.[53] Adding the cost of the basic service tier and one converter box, the average consumer would pay $63.92 for basic service and 10 cable

[52] This is based on Kagan Research's estimates of subscribers and license fees for each of the 110 networks, and assumes a 90 percent retail markup of license fees.

[53] Nielsen reports that the average cable household tuned to 17 different channels for at least 10 consecutive minutes during a recent survey week. While this count includes broadcast networks, and probably understates the number of different channels tuned to over a longer period of time, I conservatively use 10 cable networks in this example.

networks.[54] This is more than 50 percent higher than the Commission's estimated 2002 average programming and equipment charge of $40.11 for basic service, equipment and 46 satellite delivered cable networks.[55]

It is possible that a network may respond by decreasing expenditures on programming quality instead of raising license fees. However, any decrease in program quality is a cost to consumers, equivalent to a price increase. It is also quite possible that a network may not be able to recover from the decrease in revenues and increase in costs and may simply fail. Absent much better information on consumer demand for individual networks, as well as assumptions about the nature of and the path to the new industry equilibrium, it is not possible to predict which networks will fail. But it is reasonable to believe that at least some networks will be forced out of existence by unbundling.

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54 In its 2002 cable industry survey, the FCC found that the average price of the basic service tier was $14.45 and the average price of a digital converter box was $4.87. FCC, *Report on Cable Industry Prices*, MM Docket No. 92-266, July 8, 2003, at Tables 1 and 10.

55 Id.